

# Examining the Supply Chain Impact on Labor Social Security in Indonesia: A Systems Thinking Analysis

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**Abstract**—Supply chains, production networks and other complex inter-organisational relationships are defining features of contemporary business organisations. This article reviews the impact of supply chain pressures on work, employment relations and human resource management, with a particular emphasis on domestic-oriented supply chains. By utilizing systems thinking, we identify and translate several variables into the Causal Loop Diagram (CLD) to clarify the linkages among them. We found seven determinants that have contributed to the low level of labor social security membership namely: competition, lack of insurance minded, ineffective communication, incompetent marketing agents, dis-harmonized regulations, weak law enforcement, and unattractive incentives for marketing agents. This paper could benefit supply chain to evaluate the existing membership program and to improve its quality and approach. Moreover, policymakers could utilize findings and recommendations from this study to perfecting the policy based on evidence.

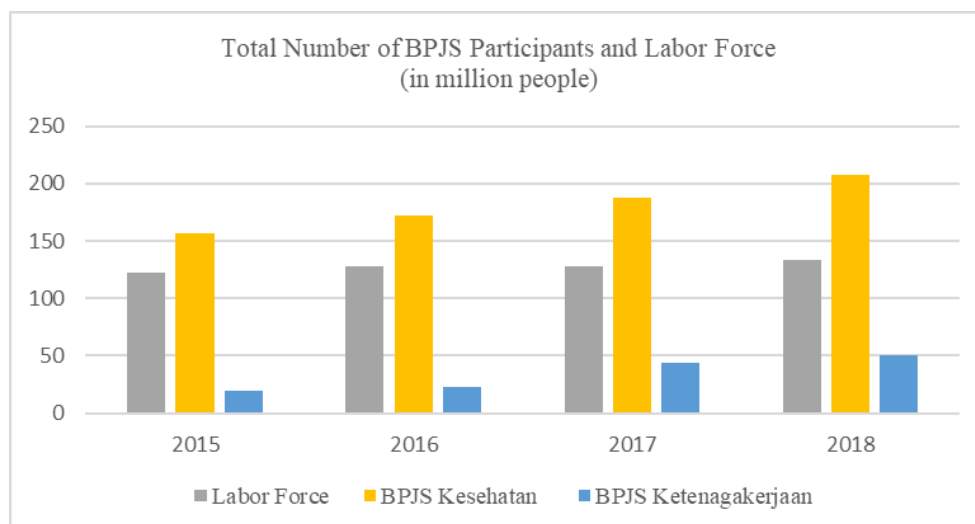
**Keywords**— labour social security, supply chain, systems thinking analysis

## 1. Introduction

The greater sophistication in the management of supply chains is part of the long-standing process in which companies and national and regional economies sharpen their focus on their areas of distinctive competence and comparative advantage. Social security is not only serves as a safety net, but social security also plays a role to reduce income inequality, poverty, and social insecurity [1]. With the growing labor force in Indonesia, it could be a

challenge for the government to provide universal social security, especially for laborers and their families. To meet the social security demand, the Government of Indonesia has decided to adopt a social security system since 1977. Later, in 2011, two national entities that served national health and employment security system known as the National Agency for Health Social Security (BPJSKes) and the National Agency for Labor Social Security (BPJSTK) were formed.

The major distinction between these two institutions is on the program being offered [2, 3]. BPJSKes provides health insurance for everyone including the laborers, however, BPJSTK offers four main programs to ensure workers' security, i.e. old-age benefit, work-accident benefit, death benefit, and pension security. The BPJSTK package covers workers who received salaries, workers who made their salary themselves, and also foreign workers, who already work in Indonesia for about six months. However, the participants' number of BPJSTK is far lower than the BPJSKes. In 2018, the number of participants of BPJSKes is 208.5 million, on the other hand, participants of BPJSTK only records 50.7 million or approximately a quarter of the BPJSKes total participants. The following table exhibits the comparison between participants of both institutions and the total labor force in Indonesia from 2015 until 2018.



**Figure 1** Number of BPJS participants and labour force, year to year

Source: various sources, authors' compilation

This article reviews the impact of supply chain pressures on work, employment relations and human resource management, with a particular emphasis on domestic-oriented supply chains [4]. Thus, the study elaborates on factors that may affect the low number of BPJSTK's participants and how to resolve the problem by using the systems thinking.

#### INDONESIA SOCIAL SECURITY SYSTEM

Supply chains and employment relations: Significance and theoretical implications

Supply chains have long characterized business activity in construction and parts of manufacturing, but there is growing interest among scholars and practitioners regarding implications of supply chain pressures for work and employment relations across a broad range of sectors. This interest can be explained by the recent tendency of organizations to segment their business arrangements, through greater use of outsourcing, offshoring and other complex inter-organisational arrangements, resulting in the proliferation of supply chains. designs its social security program based on public participation, which is means the participant will finance social security. The history begins in 1951, by the launch of Act No. 33/1947 jo Law No.2/1951 concerning work accident. By the following year, the Indonesia government keep working on developed relevant regulations regarding labor security. An important milestone is the issuance of Government Regulation (PP) No. 33 of 1977 concerning Worker Social Insurance Program (ASTEK), by the government regulation, all employers/private enterprises/state owned

enterprises have to enrol their employees in ASTEK Program.

The next momentous milestone was the enactment of Act No. 3 of 1992 concerning the Labor Social Security Program (JAMSOSTEK). The implementation of Act then strengthens by Government Regulation No. 36/1995, that PT Jamsostek was appointed as JAMSOSTEK provider. PT. Jamsostek provides basic protection to workers and their families through four protection programs, i.e. work accident security, death security, old age security, and healthcare security. Indonesia finally issued Act Number 40 on National Social Security System in the year 2004. In 2011, Act No. 24 of 2011 concerning Social Security Providers (BPJS) was constituted. Accordance to the mandates of this law, on 1st January 2014 PT Jamsostek was transformed into a national agency namely BPJSTK, who run labor social security program, i.e work accident security, death security, old age security, and pension security until today. BPJSTK is a special government agency that is responsible to President of Indonesia. Operational of BPJSTK includes recruiting new participants, collecting premiums from the existing participant, deliver the benefit of BPJSTK programs, and manage the pension fund.

BPJSTK delivers services to participants which are categorized as follows:

1. Formal Worker or Wage Recipient Worker (PU) is an individual who works and receives a salary, wage, or other compensation forms from the employer. This participant takes part in Work Accident security (JKK), Death Security (JK), Old Age Security (JHT), and Pension Security (JP).
2. Informal Worker or Non-Wage Recipient Worker (BPU) is a worker who performs economic

activities or business in a self-reliant manner to earn income from his/her activities or business. The provided security programs will include Work Accident Security (JKK), Death Security (JK), and Old Age Security (JHT).

3. Construction Worker is a worker who provides construction plan consulting services, construction work services, and construction supervision services. The provided security programs will include Work Accident Security (JKK) and Death Security (JK).

4. Indonesian Migrant Worker is an Indonesian citizen who will work or has been working and receives wages from working abroad. The provided security programs will include Work Accident Security (JKK), Death Security (JK), and Old Age Security (JHT).

## 2. METHODOLOGY

Supply chains and the employment relationship Perspectives on outsourcing tend to overlook the challenges that supply chain pressures produce for workers and managers. Decisions to outsource motivated by cost-reduction will generally involve the engagement of suppliers with minimal capacity and resources to develop strategic HRM practices who instead opt for 'low-road' strategies. Several scholars have pointed to the corrosive effect of supply chain pressures on the standard permanent employment contract, which has contributed to the growth of non-standard arrangements including subcontracting, dependent self-employment and agency-based employment.

Within eight months period in year 2018, five data gathering methods were conducted, namely focus group discussions, in-depth interviews, observations, online surveys, and literature review. Acquired data were analyzed by employing systems thinking approach, gap analysis, and stakeholder analysis [5]. Observation samples are seven regional offices and twelve branch offices that have represented three Indonesian development areas (west, central, and east). The research team interviewed a variety of respondents', i.e., top management, middle, and lower management of BPJSTK; main stakeholders of the social security system; and Perisai agents. The study evaluated the existing membership program, including the utilization of community-based membership activities and their premium-based incentives.

Systems thinking is an approach to assist an individual to view systems or problems from a wide-angle and to distinguish the type of

structures, patterns, and cycles in that systems or problems [6] and defined as sets of interdependent elements establishing collective entities [7]. In [8] define systems thinking as a method to determine problems and assess potential solutions so that any organization can evaluate the outcome of management decisions. Systems thinking approach, along with the learning organization concept, can be applied to attain group or team learning about a problem.

In [9] exemplifies seven systems thinking competencies:

Competency to determine the system properly

Competency to specify the system and identify the limitation of the system

Competency to observe the intercorrelation among variables in the systems

Competency to examine cases comprehensively

Competency to comprehend the unsettled aspects in any case

Competency to deliver one acceptable general point of view into people, who have a various mindset, in the system

Competency to integrate any area of expertise and any approach as the guideline to problem-solving

Systems thinking the approach has usually reflected by CLD, which is a diagram to examine the system archetypes to identify the system or problem leverage points as a reference to fix the systems or solve the problems [10]. In [11] describe CLD as methods that are primarily used to describe situations systemically and analyze the various boundaries, perspectives, and interrelationships that are observed. Furthermore, Causal Loop Diagrams maps how components of a situation relate to each other. This method is used to explore nonlinear interrelationships.

Feedback loops are the building blocks of CLDs and appear in two types: Reinforcing or positive feedback and Balancing or negative feedback [12]. Reinforcing refers to a situation where all the variables respond to each other in the same direction: when A goes up, B goes up as well, which leads to a further increase of A. When A goes down, B goes down as well, which leads to a further decrease of A. Balancing occurs when at least one variable in the system responds to change in another variable in the opposite direction: when A goes up, B goes down. If the relationship between B and A is positive (i.e., if B goes down, then A goes down too), then change in both variables is attenuated. The research question is answered using the following four stages:

1. Identification what are the variables involved in the membership problem of BPSJTK.
2. Explaining how those variables link to each other.
3. Explaining how those variables affect each other.
4. Determine the effect of a variable (Reinforcing or Balancing) to which it is linked.
5. Proposing recommendations based on variable interaction within the membership system.

### 3. RESULTS AND DISCUSSIONS

The following is a stakeholder analysis to make it more transparent on defining who is involved within BPJSTK program membership. According to [13], stakeholder mapping is used to determining who among stakeholders can have the most positive or negative influence on an effort or who is more likely to be affected by the effort so that proper engagement strategy can be formed to address challenges and future intervention [14].

Along with BPJS program development and implementation, several stakeholders are involved. President of the Republic of Indonesia, Financial Services Authority (OJK) and Audit Board of the Republic of Indonesia (BPK) are those who need to be kept satisfied due to their nature as a supervisor with high power. The National Social Security Council (DJSN) and several ministries are those who need to be managed carefully because DJSN acts as a

direct supervisor, compared to President and independent supervisors such as OJK and BPK. DJSN may affect the operational flow of BPJS if any problem occurs. Ministries involved such as the Ministry of Labor and Health act as those who concern about how workers get their proper social security benefits from their payment. Ministry of Finance involved in financing needs on the program through taxing and other fiscal tools. While the Ministry of Social Services focuses on poor people, who need subsidy. BPJS participants are considered to keep informed regularly on the changes happening in BPJS program execution because they are the one who subscribes and depends on the operation of the BPJS program. As a watchdog with lower interest and power, media, researchers, and academicians also play a role to monitor the whole operation of the BPJS program.

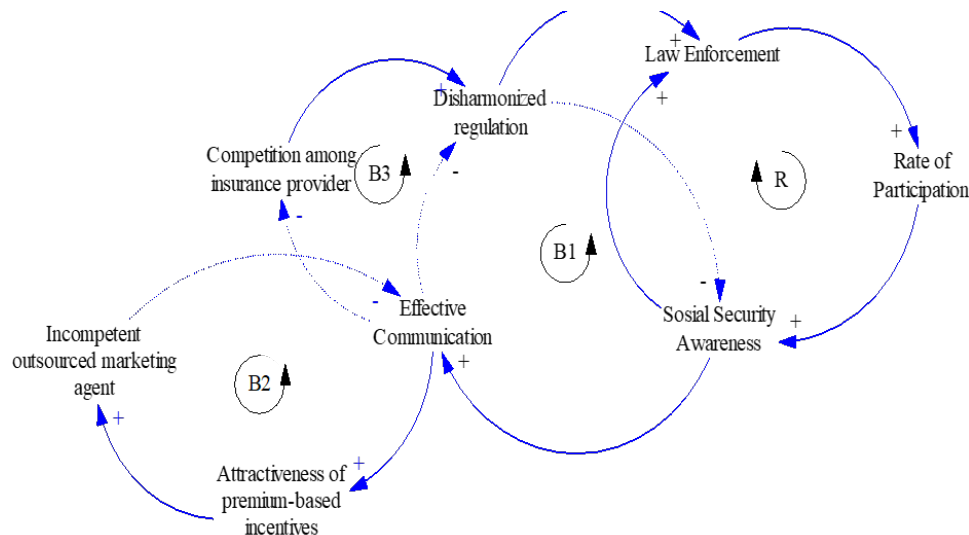
**Table 1** Power-Interest Matrix in BPJS Membership

		Interest	
		Low	High
Power	High	Keep Satisfied President Parliament OJK BPK	Manage Closely DJSN (National Social Security Council) Ministry of Labor Ministry of Health Ministry of Finance Ministry of Social Services
	Low	Monitor Media Researcher Academician	Keep Informed BPJS Participants

Source: Authors

This study found that several variables could explain the lower rate of participation in BPJSTK membership: low awareness of labor social security program, weak law enforcement, less effective communication, disharmonized regulation,

competition among insurance providers, incompetent outsourced marketing agents, and unattractive premium-based incentives. The relationship among variables related to a lower rate of participation can be described through the causal loop diagram as follow:



**Figure 2** Causal Loop Diagram of a lower rate of labor social security participation

Social Security Awareness, Law Enforcement, and Rate of Participation

BPS data (2019) shows that the number of workers is 129.36 million people, of whom 74.08 million people (57.27 percent) working in the informal sector. Of the total worker population, only 50.7 million (39.19%) are protected by the BPJSTK labour security program [15]. Furthermore, only about 3.24% of 2.4 million registered informal workers are protected by the labor security program [16]. This data confirms the low awareness regarding the importance of social security in employment, especially among informal workers

As stated by BPJSTK Head of Supervisor Board, the packages are kind of difficult to understand for people [17]. For example, people are not aware that BPJSTK has a work-accident benefit (JKK) program that is suitable for a worker who got an accident. This program will cover the workers' treatment and medication. BPJSKs also has this program. The overlap between these two programs may affect the inclination of workers to register only to one BPJS program. People are not aware of the difference between participating in BPJSKs and BPJSTK. BPJSTK provides more benefits rather than BPJSKs because BPJSTK offers 48 times of salary when workers got into an accident. Some features are still not known by people to tend to make them reluctant to register themselves to BPJSTK. The online survey of Perisai also shows that explaining the BPJSTK social security program ranks the second most challenging task. This low awareness of BPJSTK programs may affect the number of participants. BPJSTK should reform its branding so that people would identify the difference between their program and BPJS.

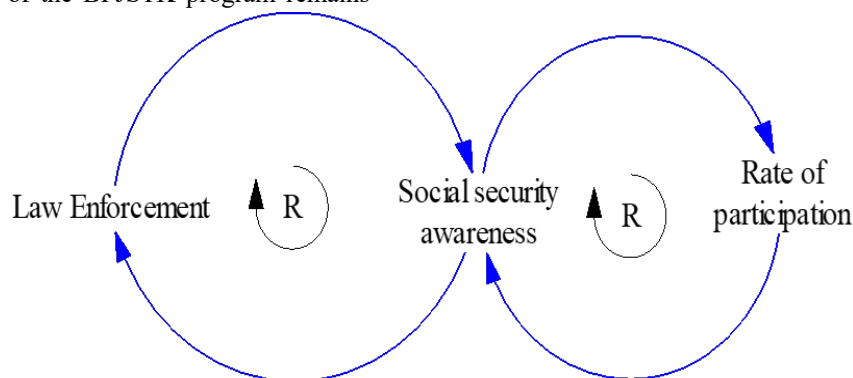
Regulation has been made for every company to register all their employees as BPJSTK member. As stated in Act no. 24/2011 about Social Security Provider (BPJS), an employer must continuously register themselves and their employee as BPJS members that conform to their needs. If an employer does not comply with the regulation, they will get administrative sanctions such as written warnings, penalties, or will not accept certain services. However, these sanctions still felt very far from strict action and a bit blurred, so there is still some niche for employers if they do not register their employees to BPJSTK benefits.

As discussed by [18], people tend to obey an act if they know there are sufficient perceived incentives for compliance. When there is a lack of punishment written in Act no. 24/2011, people tend to underestimate the clause of sanction. It is stating a precise number of fines that the company needs to pay if they are not complying with the rule will be a good starting point. It is also essential to have a great understanding of how the targeted group views the cost and benefits. For example, if the punishment for those who do not subscribe to their employees are too light (the fines are too small, or it is not directly affecting the company), the company will refuse to obey the law. It is homework for BPJS and DJSN to collaborate to weigh the punishment that will be given to the company.

Based on the illustration above, it can be seen that active law enforcement will increase social security awareness and will ultimately increase the participation rates of the BPJSTK program. Conversely, high social security awareness will strengthen law enforcement because high social security awareness will demand fair service practices, including law enforcement. Thus, it can be

concluded that the relationship between these two variables is Reinforcing (R). The level of social security awareness program has a positive effect on the level of participation in the BPJSTK program and vice versa. The low level of participation also has an impact on the low level of word of mouth of the community regarding the BPJSTK program so that public awareness of the BPJSTK program remains

small. Citizens who are aware of the importance of participating in employment social security programs will voluntarily join and even invite people around to join. In other words, word of mouth marketing will be created in an environment that is aware of social security employment. This relationship can be further described in the CLD below:



**Figure 3** Causal Loop Diagram of weak law enforcement

Ineffective Communication, Disharmonized Regulation, and Lack of Social Security Awareness Of 265 million people in Indonesia, only 1.7% of them that has insurance [19]. Albeit there is a growing awareness of the importance of having insurance [20], compared to other countries in ASEAN, Indonesia's insurance asset ratio to GDP is the lowest. So does the life insurance volume. Aside from paying the premium from the worker's salary, the government provide helps for worker and poor people who cannot afford to pay the premium. Thus, the Premium Subsidised Receiver (PBI or Penerima Bantuan Iuran) program is launched. This program initially set for BPJSKes. With this program, workers and poor people who cannot afford to pay the premium as stated will be paid by the government.

One study case in Semarang showed that some informal sector laborers are aware of BPJSTK and they feel that it is essential for the government to help them on registering themselves as BPJSTK members. Unfortunately, they still feel reluctant to pay BPJSTK premium due to the low income they have. If the premium is too high, laborers will not be able to pay the premium because they tend to allocate their income to the primary needs of their families. Informal laborers still feel inclined to the notion of government pay for their monthly premiums where their sources of money come from state income [21].

In 2016, there is an initiative from the House of Representatives to plan the PBI program for BPJSTK members. This plan is reasonable to

implement for the sake of increasing participant numbers, especially for those informal sector laborers that might feel burdened with the current premium plan. However, seeing the deficit resulted from the BPJSKes PBI Program, launching another PBI program for different BPJS, will enlarge the state budget deficit [22]. According to [23], rather than using an economic approach, there should be a planned behavior approach to increase insurance participants. Through emphasizing the psychological role, such as perceived usefulness, perceived risk, health value, subjective norms, and behavioral control, through various channels, hopefully, there will be an increase in insurance participants' number.

With the growing productive population, Indonesia has high profitability to the insurance companies, but the penetration is still low. It is an opportunity and challenge to them to gain more customers in the following year. Indonesia's insurance market is still dominated by a narrow range of products, mostly individual, regular premium, life insurance savings products that sold predominantly through agent or bancassurance channels [24]. It is also reported that there is a growing market in Islamic insurance or takaful, where this can be a great potential to grow, considering the vast market of Muslim in Indonesia that currently care more about religiosity on choosing the product or services they would like to consume.

To increase awareness of labor social security, BPJSTK needs to build communication with the community continuously. For effective communication of communicators, in this case, BPJSTK, relevant ministries, and other institutions

need to design the same message. This message can be disseminated through digital and conventional channels. That is why technological adaptation in government institutions become essential. Technology can ease communication flows, identify communication barriers, and ensure feedback mechanisms work well. The idea to be conveyed by the communicant must be processed in such a way as to be easily understood and attractive to the recipient of the message. The message must be appropriately planned to make sure the news is correct and reach the target.

Today, BPJSTK has implemented adequate digital-based information and communication channels. However, unfortunately, this information channel has not functioned optimally so that the distribution of information on labor social security programs has not distributed equally. This issue might be influenced by the disparity of telecommunications infrastructure in the territory of Indonesia. Indonesia's Development of Information and Communication Technology Index (IP-ICT) in 2017 shows a scale of 4.99 on a scale of 1-10 (BPS, 2017).

Effective communication must be established by BPJSTK with various relevant institutions starting from the national level to the community level. The lack of effective communication of the labor social security program can be seen from the different MoUs that must be made by branch offices with various government offices. In-depth interviews with Makassar Office indicate the need for cooperation agreements with Governors and Regents in their working areas if they wish to obtain support regarding the acquisition of membership. BPJSTK should not need such MoUs because labor protection is compulsory, which must be supported by every element of society, especially the relevant government officials. Moreover, BPJSTK does not provide a standardized marketing tool to the Perisai

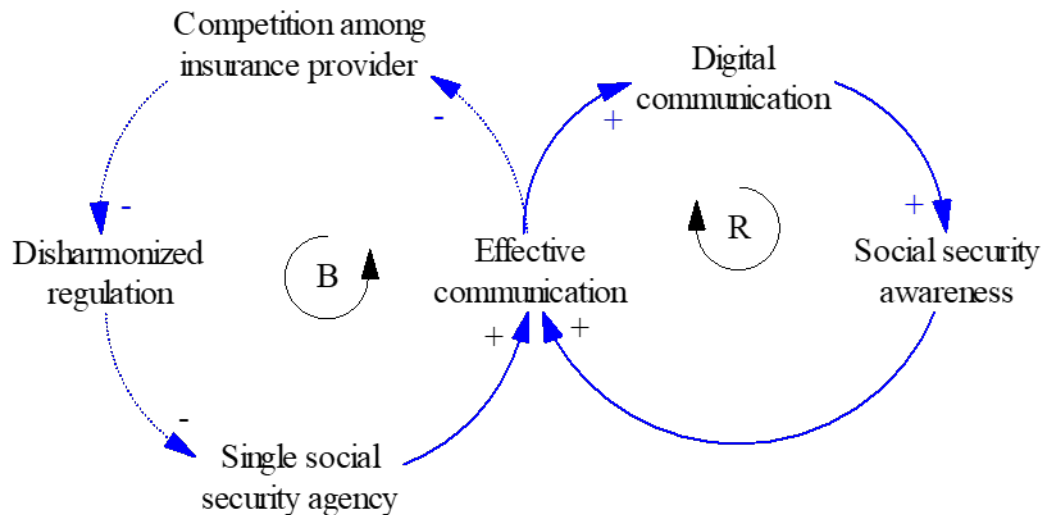
agent, only 8.15% of whom using a marketing kit.

Moreover, BPJSTK does not provide a standardized marketing tool to the Perisai agent, only 8.15% of whom using a marketing kit. Perisai agents are BPJSTK partners in expanding membership. The absence of marketing tools has caused the socialization of employment guarantee programs to be varied, following the competence of the Perisai agents.

The low quality of communication can lead to disharmony of regulation. According to [25], one of the challenges they found to increase active participant numbers is the lack of regulation harmonization among ministry/institutions, so they still think that BPJSTK membership is not compulsory. Evidence of disharmonious regulation can be seen in overlapping social security policies between the Ministry of Agriculture, Ministry of Marine Affairs and Fishery, and BPJSTK. Those institutions provide the same protections for farmers and fishers through *Jasindo* as one of state-owned enterprise that provides insurance for them to protect their works from drought, flood, and accident relating to fishery activities [26].

As a government institution, BPJSTK should be stricter on membership compliance, especially to the ministry/institution. Before BPJS was founded, there are PT Taspen and PT Asabri who are obliged to manage funds from the national state budget for civil servants, military officers, police officers, and other government institution employees' social security, ranging from health care to pension fund. This overlap can trigger a conflict between institution, where there will be a competition to increase participant numbers. Ineffective communication and disharmony of regulations related to labor social security make efforts to increase awareness of social security less optimal. Thus, it can be concluded that effective communication can reduce disharmony of regulation, which in turn will increase public social security awareness, and vice versa. This relationship can be further described in the CLD below:





**Figure 4** Causal Loop Diagram of effective communication, disharmonized regulation, and social security awareness

Incompetent Outsourced Marketing Agents, Ineffective Communication, and Social Security Awareness

Perisai or National Social Security Agent, is a third-party using community-based agency who helps BPJSTK to increase their participant number. Perisai agent is commonly coming from high school graduates (44.32%), who never have experience in being an insurance agent or similar jobs to it. The lack of understanding of the BPJSTK itself can contribute to the low participant numbers due to a lack of education on the importance of the BPJSTK program the agent got. In other words, Perisai agents are not able to help BPJSTK in building effective communication. To make it worse, BPJSTK has been recruiting too many incompetent outsourced marketing agents which causing inefficient human capital resources in BPJSTK. Ideally, the Perisai agent is the frontline officer who can influence their potential client to subscribe to the program. In Addition, relatively few trainings for Perisai agent carried out by BPJSTK concerning this incompetence third party agent issues. So it cannot helps to improve the knowledge of Perisai regarding social security.

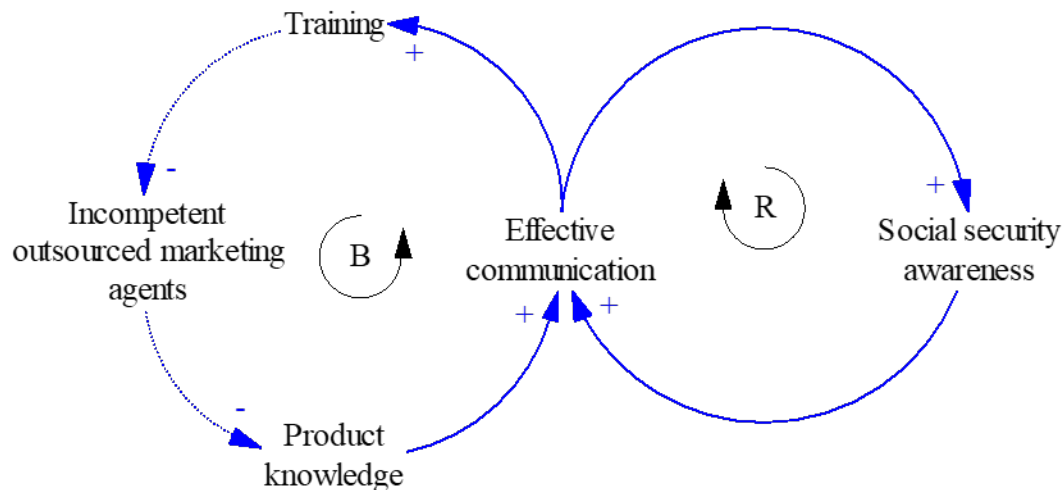
Social security is a product where consumers feel the information is needed the most before they subscribe to one of the providers. The irreversibility to undo the decision of potential member candidate have made at the beginning of subscription make them feel it is crucial to research more in-depth to every provider they have in mind. The agent plays

an important role to inform the candidate about the benefits they will get when they join their insurance provider [27]. It is a reputational risk that BPJSTK may face in case Perisai Agent keeps making the same mistake as they did before. According to BPJSTK (2017), most laborers still not aware of the whole format of BPJSTK. According to the previous study, informal labors feel they need more socialization on the BPJSTK program [28]. The incompetence of Perisai agents on educating potential clients can be one of the reasons why the low awareness of the BPJSTK program is still happening.

In [29] has conducted an experiment where workers get intervention on social security information dissemination. The study found out that mild intervention like a brochure with a better display and reliable content on the facts of social security benefits with a testimonial and some knowledge on claiming the social security benefit. The kind of intervention that is better recalled by the respondents in the experiment conducted was about the better or worse deal the member got if they work for more years. Essential knowledge for social security claiming such as the more extended work time will result in a higher claim can be a point to emphasize when educating the potential client to attract them.

Thus, it can be concluded that incompetent outsourced marketing agents can make communication less effective and ultimately reduce social security awareness and vice versa. This relationship can be further described in the CLD below:





**Figure 5** Causal Loop Diagram of incompetent outsourced marketing agents, effective communication, and social security awareness

The unattractiveness of Premium-Based Incentives, Incompetent Outsourced Marketing Agents, and Ineffective Communication

The fourth rule from ten principles of economics brought by [30] said that people would respond to incentives. Policymakers must remember about incentives, that policy change will affect people's change of view for cost and benefit and behavior. If policymakers fail to address the incentives issue, they will find themselves in the endpoint where they did not intend to be at the beginning.

Perisai incentives consist of acquisition and contribution fees. Perisai agent will receive IDR500 thousand, every 1st of the following month after acquires 50 new participants, which is not accumulative. Besides, Perisai also receives 7.5% of the total contribution. Acquisition and contribution fees are paid with a composition of 10% to the Perisai Office and 90% to the Perisai agent. Perisai agents can be deactivated if they do

not recruit a new member and pay the premium for three consecutive months. Termination is done automatically through the Perisai's information system.

Perisai agents are only allowed to recruit new participants from the small and micro business segments and self-employed. The micro and small-scale business definition, according to BPJSTK, is the company with a maximum contribution amount of IDR7 million per month. If the participant experiences an excess of IDR7 million premium, the participants can be transferred to BPJSTK. This segment is very challenging and difficult to be recruited as a participant in labor social security programs. Although the labor law states that all workers must be protected by labor insurance, there is a lack of awareness problems regarding this regulation. This segment needs continuous socialization and education at first before they take part in employment social security programs.

Figure 6 Incentive comparison between Perisai agent and regular insurance agent

Source: Wardhana, Novita, Alkarim, and Hidayatullah (2020)

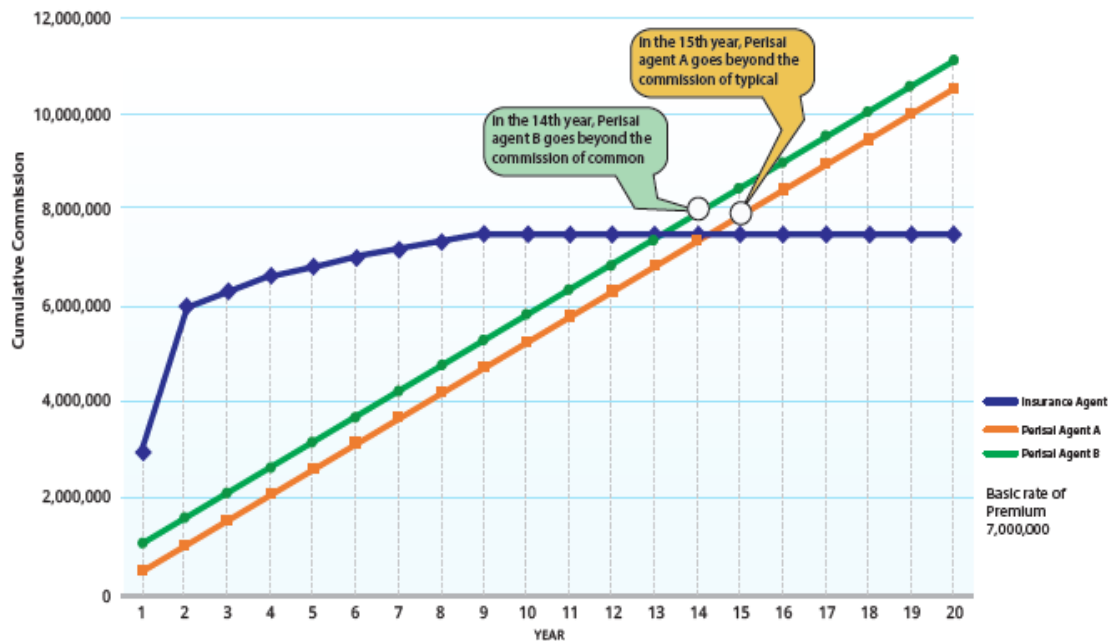


Figure 6 Incentive comparison between Perisai agent and regular insurance agent

Unfortunately, this study found that the incentive scheme offered to Perisai is worse than an insurance agent. The situation occurs due to bad business modeling on Perisai. After comparing to several similar programs related to social security, Perisai can be seen as closely compared to regular insurance agent rather than they are supposed to be adopted the program, Jimukumiai, and Sharoushi. Although the similarity is high, the incentives that Perisai agent get from recruiting new member is lower than the regular insurance agent get.

Additionally, lousy business planning may affect the loss of direction of Perisai to find which program they would most likely to adopt. If the lousy business planning is still going on, many people will prefer to register to other insurance agents from other private insurance providers instead of Perisai. Thus, to have an active program, good literature must be found first, hopefully, to fulfill the gap on which BPJSTK still feel they still lack. Difficulty in finding literature about Sharoushi and Jimukumiai can be the cause of this

lousy business modeling.

After drawing an incentive compensation simulation between Perisai agent and regular insurance agents, we found that it takes 14 years (assuming the bonus is given if agent succeeds to recruit 50 people) and 15 years (assuming that Perisai agent is solely relying on the premium commissions, no bonus given) to earn higher commission than a regular insurance agent. The survey of Perisai's perception against the threshold of IDR7 million for the acquisition of salaried workers showed that only 54.85% of respondents who argue that the policy was correct. The survey also shows that the policy causes 80.13% of Perisai earning less than IDR 1 million, in contrast to 0.86% of shields that can make more than 10 million. These surveys and simulation data confirm that the current incentive scheme is not attractive.

This unattractive incentive scheme certainly makes the recruitment of competence agents as Perisai become complicated. The online survey results show some facts related to Perisai agent competence, which is shown below:

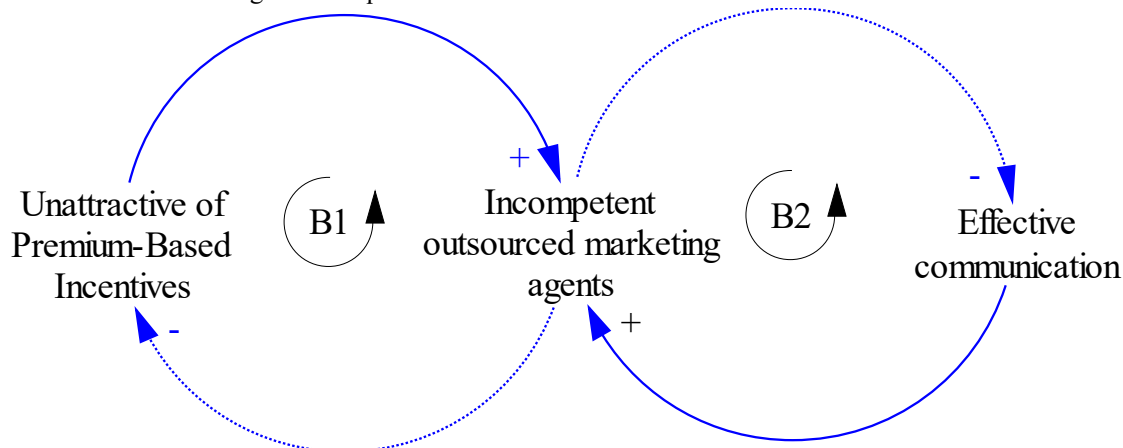
**Table 2:** Facts of *Perisai* Competence

Never advised a company/institution in calculating the amount of social security program contributions and managing its personnel administration.	66,45%
Never managed social security claims for workers.	56,7%
Never provided consultancy or training services to companies related to employment or labor insurance social systems.	77,48%
Never handled labor conflicts between companies and employees.	92,76%
Lack of experience working in the field of human resource development.	69,37%

Source: Authors

BPJSTK can attract professional insurance agents to join as a *Perisai* if restrictions on the scope of the acquisition do not accompany the incentive scheme. The less competent *Perisai* Agents surely make the function of education and socialization of employment social security programs less effective. The consequence of this less attractive incentive scheme makes the purpose of establishing *Perisai* as a medium of accelerating the acquisition of

participation hard to achieve. If BPJSTK can create an attractive incentive scheme and provide a self-development program for *Perisai*, then the competence of the *Perisai* as outsourced marketing agents can be increased. With the increase in *Perisai* competencies, they can help BPJSTK to educate the public effectively and help increase the number of participants. The relationship between these variables can be further described in the CLD below:



**Figure 7** Causal Loop Diagram of unattractive premium-based incentives

**4. Conclusions and Recommendations**

This study focuses on several themes: key theoretical frameworks for analysing supply chains and employment relations; the relationship between outsourcing and business strategies; the implications of different supply chain configurations for the employment relationship; the challenges of regulating labour standards in supply chains. Qualitative data obtained were analyzed by using systems thinking, stakeholder analysis, and forecasting. This study found that several variables could explain the lower rate of participation in BPJSTK membership are low awareness of labor social security program, weak law enforcement, less effective communication, disharmonized regulation, competition among insurance providers, incompetent outsourced marketing agents, and

unattractive premium-based incentives. Interactions between these variables are causal and nonlinear. Based on our findings, we can see that there are still many rooms to improve the BPJSTK strategy to enhance participant numbers in the future. In designing the reinforcing strategy for expanding membership, BPJSTK should understand how each variable interacts and synergizes with others. Through this study, we would like to suggest several recommendations. Firstly, the level of participation in the BPJSTK program will increase along with the increase in social security awareness and law enforcement. Effective communication and harmony regulation influence social Security Awareness itself. BPJSTK needs to identify bottlenecks in its marketing communication strategy to make its program spread extensively, well understood, and standardized. The use of digital technology needs to be optimized to reach every level

of civilization. Besides, BPJSTK needs to synergize and formalize the communication of social security program with all government agencies; so that branch offices and Perisai will receive field support when conducting socialization. BPJSTK can collaborate with educational institutions so that an understanding of labor social security can be obtained earlier. A coordination unit consists of the ministry of manpower, prosecutors, and other relevant ministries that should be formed to strengthen law enforcement.

By the existence of such a coordination unit, each step of law enforcement can be communicated and coordinated correctly. Secondly, disharmonized regulation is influenced by weak communication and coordination between relevant government agencies. The act of social security system states that all services related to social security are the authority of the BPJS agencies (BPJSKes and BPJSTK). By returning authority to both BPJS agencies gradually, the disharmony of regulatory issues can be resolved.

Thirdly, to be able to attract competent Perisai agents, BPJSTK needs to review the Perisai incentive scheme to be more competitive, for example by eliminating the threshold on the acquisition and clarifying the responsibility between the Perisai agent and BPJSTK marketing staff. If BPJSTK feels that they have not found the best business model to use external parties to increase their member, they can return their marketing functions to the marketing officer in BPJSTK without involving external parties. What they should put have in mind is there will be a reputation risk they may face if they insist on recruiting an external party that does not have aligned culture and knowledge as BPJSTK officer has. Equal human resource allocation throughout Indonesia is the key to reach laborers who have not got proper access for information about the importance of social security, especially for their employment.

The second option is that if BPJSTK feels the urge to recruiting external parties, they must cooperate with qualified parties to mitigate risk and reduce the cost. Qualified parties should be the institutions that are regulated by law, supervised by governmental institutions and self-regulating agencies. They are also equipped with established codes of ethics, training systems, and supporting organizations. According to this study, BPJSTK has not met its goal to adopted Sharoushi and Jimukumiai in the right way. Perisai also brought negative impacts to

BPJSTK due to several risks they have when implementing this program without a proper business model.

Fourthly, data quality is paramount today. We recommend BPJSTK to implement blockchain technology to improve its membership and data quality. BPJSTK should also integrate their data with other institutions. By doing this, data will be more valuable not only for BPJSTK but also for other institutions, so that a single identification number for all Indonesian can be realized.

In the end, for the subsidy program for poor people, further study needed to be conducted to find the balance between the funds will be allocated to them that is not hurting the state budget. Other partnerships to cover this subsidy with the private sector or any other institutions may be considered too.

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